US009410935B2

(12) **United States Patent**
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(10) **Patent No.: US 9,410,935 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **MEASUREMENT PROCESS OF MINIMUM MISCIBILITY PRESSURE (MMP) AND CRITICAL POINTS OF A GAS IN CRUDE OILS OR BINARY MIXTURES**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/711,385**

(22) Filed: **May 13, 2015**

(65) **Prior Publication Data**

US 2015/0330962 A1 Nov. 19, 2015

(30) **Foreign Application Priority Data**

May 14, 2014 (MX) MX/a/2014/005812

(51) **Int. Cl.**
E21B 47/06 (2012.01)
G01N 33/28 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***G01N 33/28*** (2013.01); ***E21B 47/06*** (2013.01); ***G01N 25/4873*** (2013.01); ***G01N 33/2823*** (2013.01); *E21B 43/25* (2013.01); *G01N 25/00* (2013.01); *Y10T 436/214* (2015.01)

(58) **Field of Classification Search**
CPC ... G01N 33/2823; G01N 33/28; G01N 25/00; G01N 33/26; G01N 25/02; G01N 25/4873; E21B 47/06; E21B 43/25; E21B 49/08; G01L 7/18; G01L 9/00; Y10T 436/214
See application file for complete search history.

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(57) **ABSTRACT**

The present invention provides a new process of the transitiometric scanning technique to determine in an experimental way the minimum miscibility pressure of any sample of hydrocarbon at constant temperature (from the atmospheric temperature to 673 K) in the pressure interval of the atmospheric temperature to 400 MPa, including pressure at which the organic matter will precipitate due to the CO_2 injection, based on a transitometric technique which has proved to be reliable, highly accurate and highly reproducible. The apparatus used is based on a highly accurate control of the pVT variables and the calorimetric determination of the present phase transitions during the injection process of gases into hydrocarbons. Accurate control of pVT variables enables the determination of the derivative thermodynamic variables useful to define the type of phase transition.

4 Claims, 6 Drawing Sheets